

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (canceled)
3. (currently amended) A digital projector as in claim 1 and wherein a first and a second sensors are located to capture at least two of said fiducials ~~and said fiducials are spatially separated.~~
4. (canceled)
5. (currently amended) ~~A digital projector as in claim 1~~ A digital projector having closed loop three color alignment comprising:
 - a light source;
 - an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
 - a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
 - wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
 - a combiner which combines said modulated first, second, and third wavelengths bands;
 - a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;
 - wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
 - wherein said microprocessor determines an error based on said relative position of said fiducials;

wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and

wherein said fiducial data comprises a multiplicity of spatially separated fiducials each comprising a multiplicity of pixels in a predetermined pattern.

6. (currently amended) A digital projector as in claim 1 5 wherein said fiducial data for each of said first, second, and third wavelength bands is located in a same spatial position relative to said image data.

7. (currently amended) A digital projector as in claim 1 5 wherein said diverter diverts all of said fiducial data to said sensor.

8. (currently amended) ~~A digital projector as in claim 1~~ A digital projector having closed loop three color alignment comprising:

a light source;

an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;

a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;

wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;

a combiner which combines said modulated first, second, and third wavelengths bands;

a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;

wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;

wherein said microprocessor determines an error based on said relative position of said fiducials;

wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and

wherein an element between said diverter and said sensor reduces an amount of light impinging on said sensor.

9. (currently amended) ~~A digital projector as in claim 1~~ A digital projector having closed loop three color alignment comprising:
a light source;
an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
a combiner which combines said modulated first, second, and third wavelengths bands;
a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;
wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
wherein said microprocessor determines an error based on said relative position of said fiducials;
wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and
wherein a first sensor determines position and a second sensor detects focus.

10. (currently amended) A digital projector as in claim 4 5 wherein said spatial light modulators impart fiducial data to said first, second, and third wavelength bands in a predetermined sequence.

11. (currently amended) A digital projector as in claim 4 5 wherein said sensor collects said fiducial data from each of said first, second, and third wavelength bands in a predetermined sequence.

12. (currently amended) A digital projector as in claim 4 5 wherein said microprocessor determines said wavelength band by the predetermined sequence.

13. (currently amended) ~~A digital projector as in claim 4~~ A digital projector having closed loop three color alignment comprising:
a light source;
an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
a combiner which combines said modulated first, second, and third wavelengths bands;
a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;
wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
wherein said microprocessor determines an error based on said relative position of said fiducials;
wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and
wherein wavelength filters are presented in a predetermined sequence in front of said sensor.

14. (currently amended) A digital projector as in claim 4 5 wherein said sensor discriminates between multiple wavelength bands.

15. (currently amended) A digital projector as in claim 4 5 wherein said spatial light modulators are LCDs.

16. (currently amended) A digital projector as in claim 4 5 wherein said spatial light modulators are digital micro-mirrors.

17. (currently amended) A digital projector as in claim 4 5 wherein uniformizing optics are located between said light source and said optical engine.

18. (currently amended) A digital projector as in claim 4 5 wherein said light source is a xenon lamp.

19. (currently amended) A digital projector as in claim 4 5 wherein said light source is a laser.

20. (currently amended) A digital projector as in claim 4 5 wherein ~~in~~ a mask separates said fiducials from a projected image.

21. (canceled)

22. (currently amended) ~~A digital projector as in claim 21~~ A digital projector having closed loop three color alignment comprising:
a light source;
an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
a combiner which combines said modulated first, second, and third wavelengths bands;
a sensor which senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
wherein said microprocessor determines an error based on said relative position of said fiducials;

wherein said microprocessor sends a signal to an actuator on at least one of said spatial light modulators to resolve said error; and
wherein a mask separates said fiducials from a projected image.

23. (original) A digital projector as in claim 22 wherein said mask is mounted with a heat dissipating unit.

24. (original) A digital projector as in claim 22 wherein said fiducial data is imaged onto said mask and said sensor is an imaging system which collects said fiducial data from said mask.

25. (currently amended) ~~A digital projector as in claim 21~~ A digital projector having closed loop three color alignment comprising:
a light source;
an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
a combiner which combines said modulated first, second, and third wavelengths bands;
a sensor which senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
wherein said microprocessor determines an error based on said relative position of said fiducials;
wherein said microprocessor sends a signal to an actuator on at least one of said spatial light modulators to resolve said error; and
wherein said sensor is on a mask.

26. (currently amended) A digital projector as in claim ~~24~~ 22 wherein said sensor is comprised of a first and second sensor wherein said first and second sensors are located on corners of said mask.

27. (canceled)

28. (canceled)

29. (currently amended) ~~A digital projector as in claim 27~~ A digital projector having closed loop three color alignment comprising:
a light source which produces first, second, and third wavelengths bands;
a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
a combiner which combines said modulated first, second, and third wavelengths bands;
a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;
wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
wherein said microprocessor determines an error based on said relative position of said fiducials;
wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and
wherein a first and a second sensors are located to capture at least two of said fiducials and said fiducials are spatially separated.

30. (currently amended) A digital projector as in claim ~~27~~ 29 wherein said fiducial data comprises a multiplicity of pixels in a predetermined pattern.

31. (new) A digital projector having closed loop three color alignment comprising:

- a light source;
- an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
- a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
- wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;
- a combiner which combines said modulated first, second, and third wavelengths bands;
- a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;
- wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;
- wherein said microprocessor determines an error based on said relative position of said fiducials;
- wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and
- wherein said spatial light modulators impart fiducial data to said first, second, and third wavelength bands in a predetermined sequence.

32. (new) A digital projector having closed loop three color alignment comprising:

- a light source;
- an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;
- a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;
- wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;

a combiner which combines said modulated first, second, and third wavelengths bands;

a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;

wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;

wherein said microprocessor determines an error based on said relative position of said fiducials;

wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and

wherein said sensor collects said fiducial data from each of said first, second, and third wavelength bands in a predetermined sequence.

33. (new) A digital projector having closed loop three color alignment comprising:

a light source;

an optical engine which splits a beam of light from said light source into first, second, and third wavelengths bands;

a first, second, and third spatial light modulator which imparts image data and first, second, and third fiducial data respectively to said first, second, and third wavelengths bands;

wherein said first, second, and third wavelengths bands are directed respectively to said first, second, and third, spatial light modulator;

a combiner which combines said modulated first, second, and third wavelengths bands;

a diverter which diverts a portion of said combined modulated wavelengths bands to at least one sensor;

wherein said sensor senses a relative position of the each of said fiducials and sends said position information to a microprocessor;

wherein said microprocessor determines an error based on said relative position of said fiducials;

wherein said microprocessor sends a signal to at least one component of said system to resolve said error; and

wherein said microprocessor determines said wavelength band by the predetermined sequence.